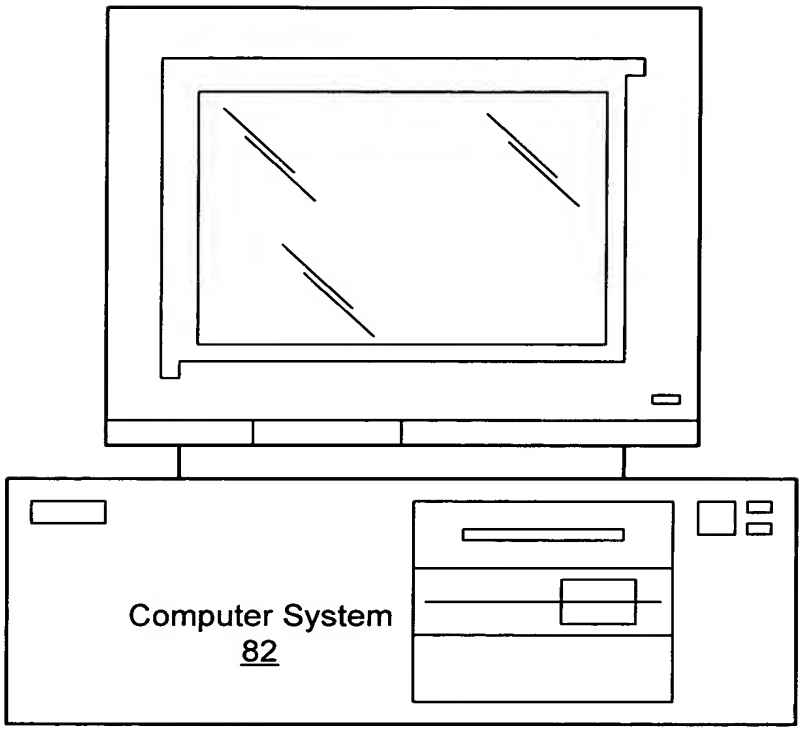


FIG. 1

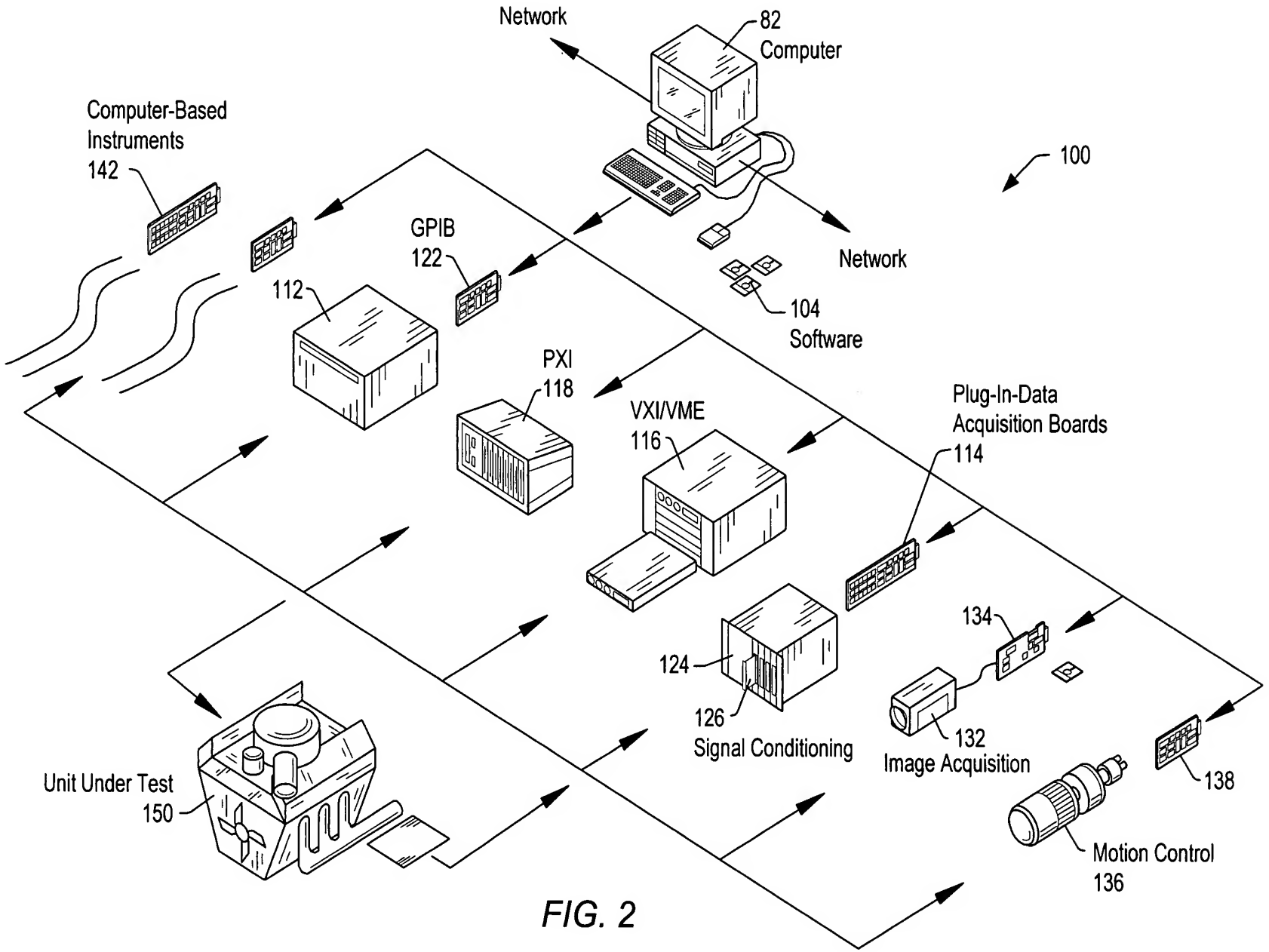
Network
82
Computer
Computer-Based
Instruments
142
100
GPIB
122
112
Network
104
Software
PXI
118
VXI/VME
116
Plug-In-Data
Acquisition Boards
114
134
124
126
Signal Conditioning
132
Image Acquisition
138
Unit Under Test
150
Motion Control
136

FIG. 2

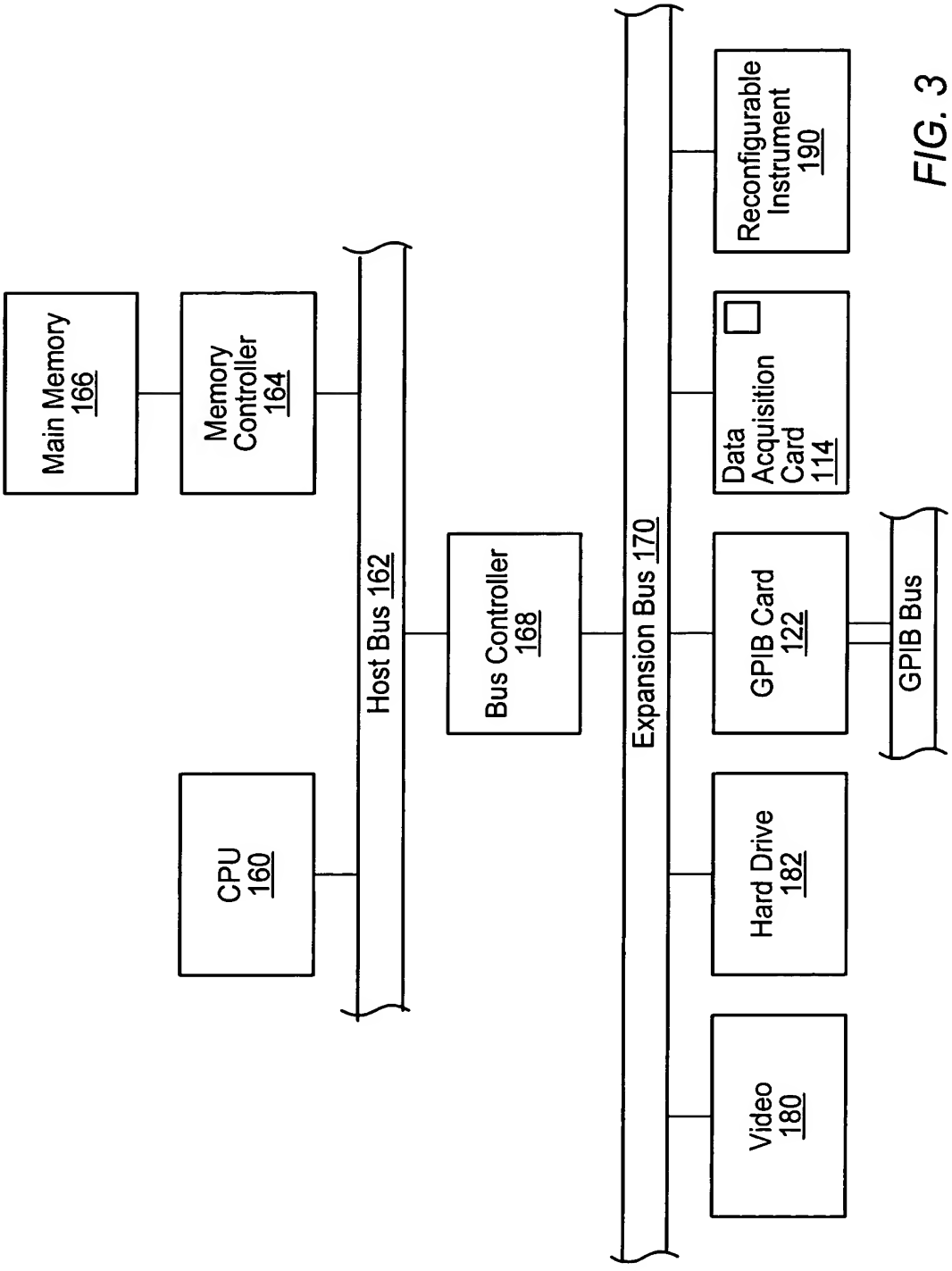
Main Memory 166
Memory Controller 164
Host Bus 162
CPU 160
Bus Controller 168
Expansion Bus 170
Reconfigurable Instrument 190
Data Acquisition Card 114
GPIB Card 122
GPIB Bus
Hard Drive 182
Video 180

FIG. 3

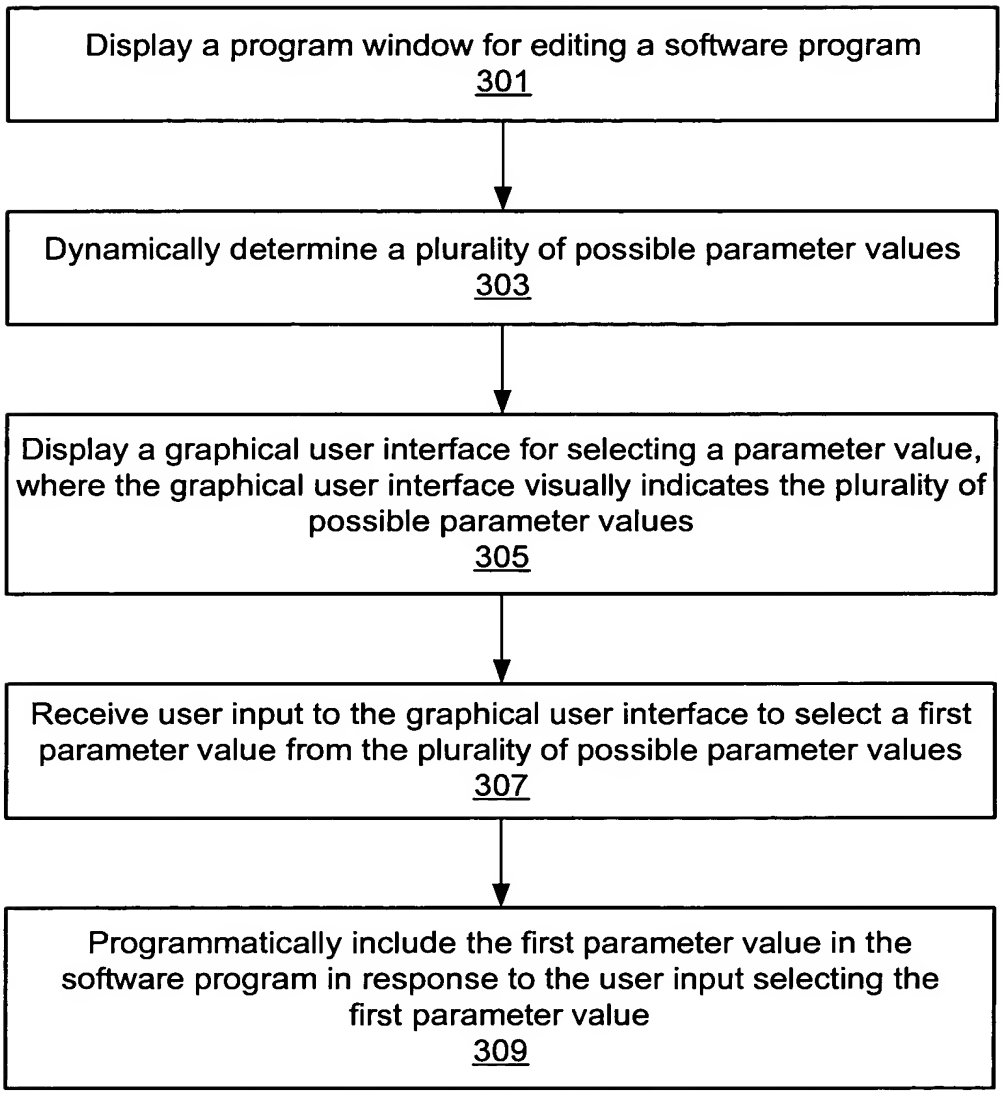
Display a program window for editing a software program
301
Dynamically determine a plurality of possible parameter values
303
Display a graphical user interface for selecting a parameter value, where the graphical user interface visually indicates the plurality of possible parameter values
305
Receive user input to the graphical user interface to select a first parameter value from the plurality of possible parameter values
307
Programmatically include the first parameter value in the software program in response to the user input selecting the first parameter value
309

FIG. 4

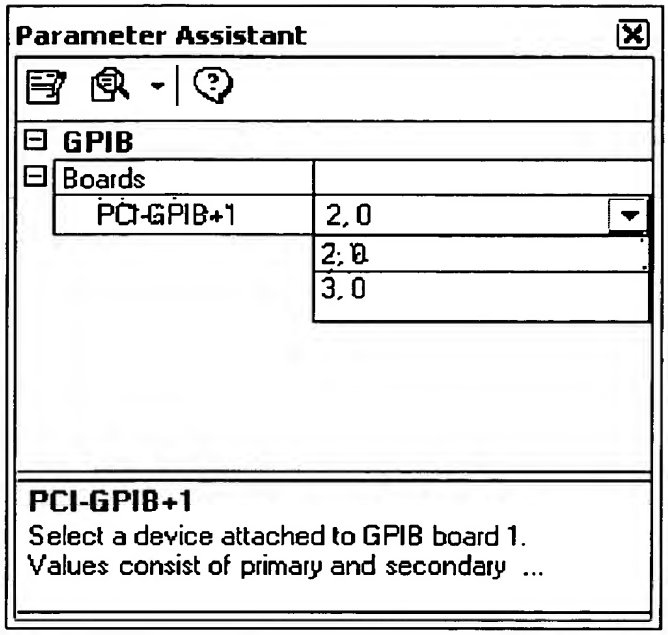
Parameter Assistant
GPIB
Boards
PCI-GPIB+1
2, 0
2, 0
3, 0
PCI-GPIB+1
Select a device attached to GPIB board 1.
Values consist of primary and secondary ...

FIG. 5

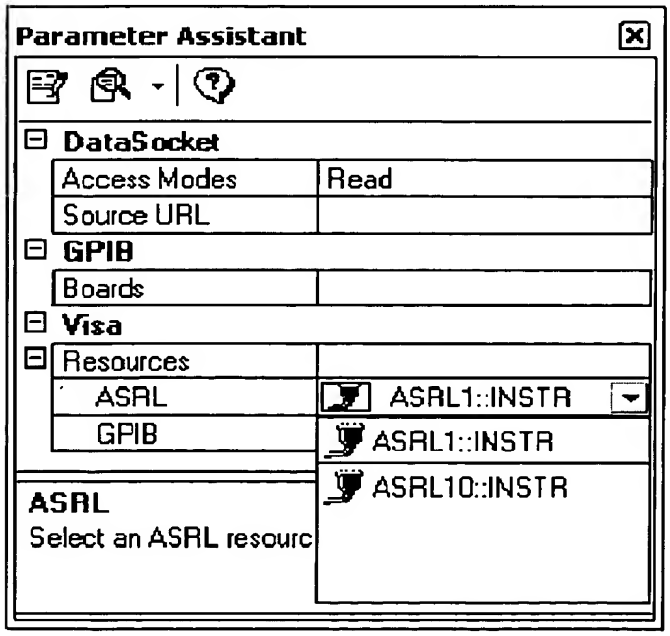
Parameter Assistant
DataSocket
Access Modes
Read
Source URL
GPIB
Boards
Visa
Resources
ASRL
ASRL1::INSTR
GPIB
ASRL1::INSTR
ASRL10::INSTR
ASRL
Select an ASRL resourc

FIG. 6

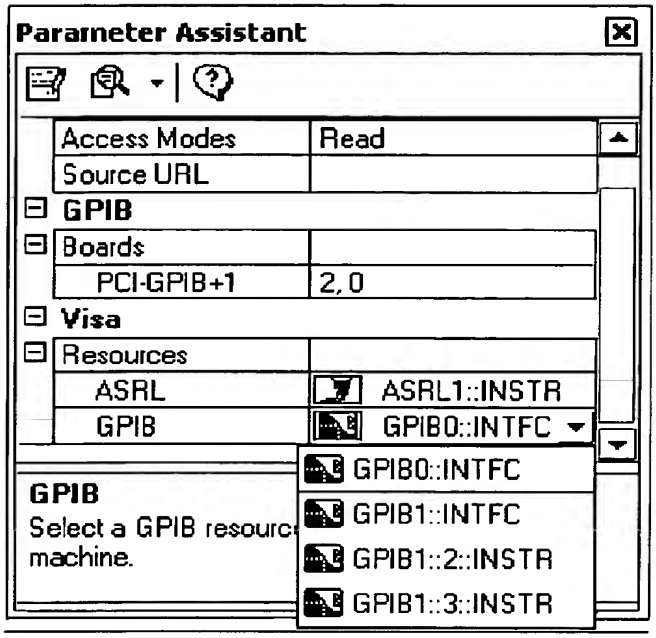
Parameter Assistant
Access Modes
Read
Source URL
GPIB
Boards
PCI-GPIB+1
2, 0
Visa
Resources
ASRL
ASRL1::INSTR
GPIB
GPIB0::INTFC
GPIB0::INTFC
GPIB1::INTFC
GPIB1::2::INSTR
GPIB1::3::INSTR
GPIB
Select a GPIB resourc
machine.

FIG. 7

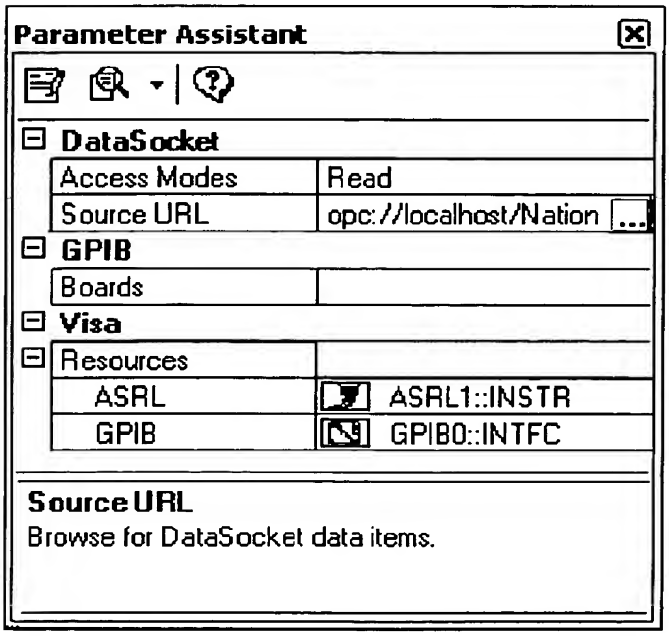
Parameter Assistant
DataSocket
Access Modes
Read
Source URL
opc://localhost/Nation
GPIB
Boards
Visa
Resources
ASRL
ASRL1::INSTR
GPIB
GPIB0::INTFC
Source URL
Browse for DataSocket data items.

FIG. 8

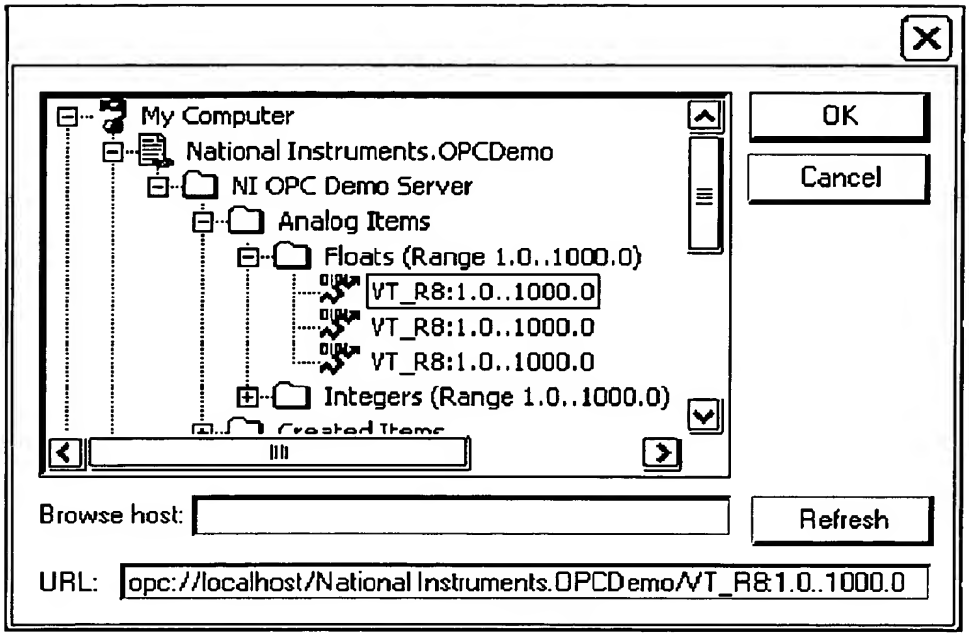
My Computer
National Instruments.OPCDemo
NI OPC Demo Server
Analog Items
Floats (Range 1.0..1000.0)
VT_R8:1.0..1000.0
VT_R8:1.0..1000.0
VT_R8:1.0..1000.0
Integers (Range 1.0..1000.0)
OK
Cancel
Browse host:
Refresh
URL:
opc://localhost/National Instruments.OPCDemo/VT_R8:1.0..1000.0

FIG. 9

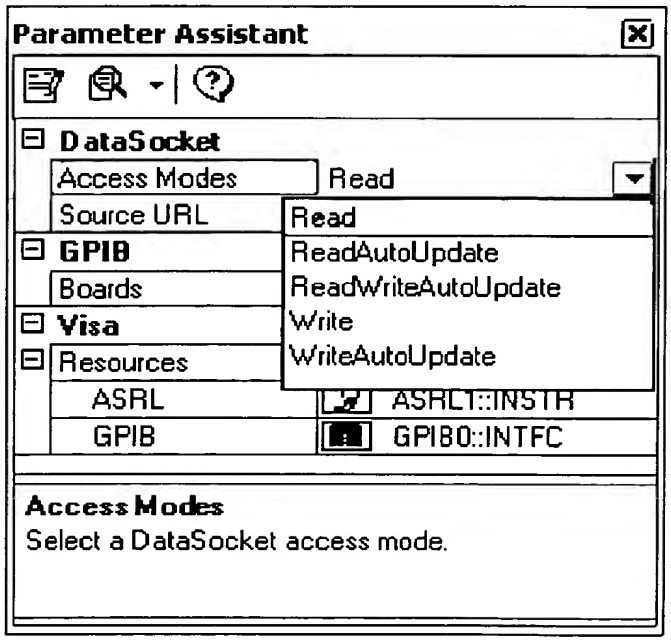
Parameter Assistant
DataSocket
Access Modes
Read
Source URL
Read
ReadAutoUpdate
ReadWriteAutoUpdate
Write
WriteAutoUpdate
GPIB
Boards
Visa
Resources
ASRL
ASRL1::INSTR
GPIB
GPIB0::INTFC
Access Modes
Select a DataSocket access mode.

FIG. 10

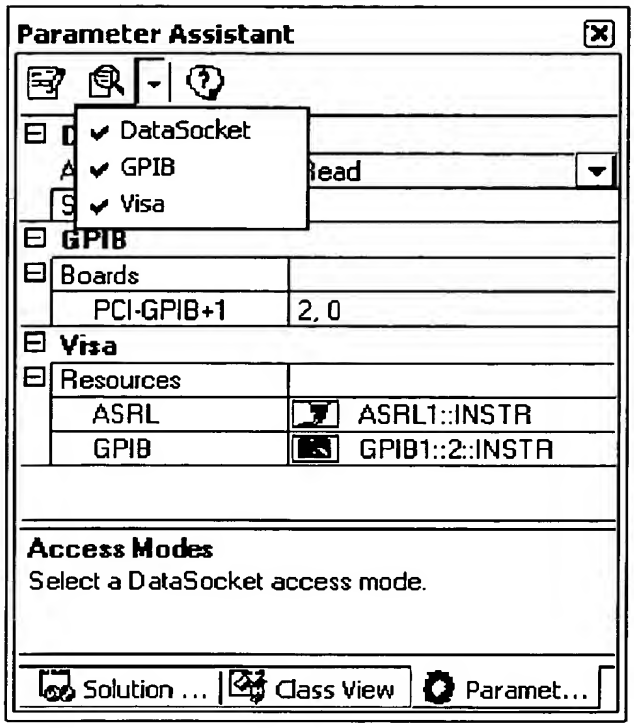
Parameter Assistant
DataSocket
GPIB
Visa
Read
GPIB
Boards
PCI-GPIB+1
2, 0
Visa
Resources
ASRL
ASRL1::INSTR
GPIB
GPIB1::2::INSTR
Access Modes
Select a DataSocket access mode.
Solution ...
Class View
Paramet...

FIG. 11

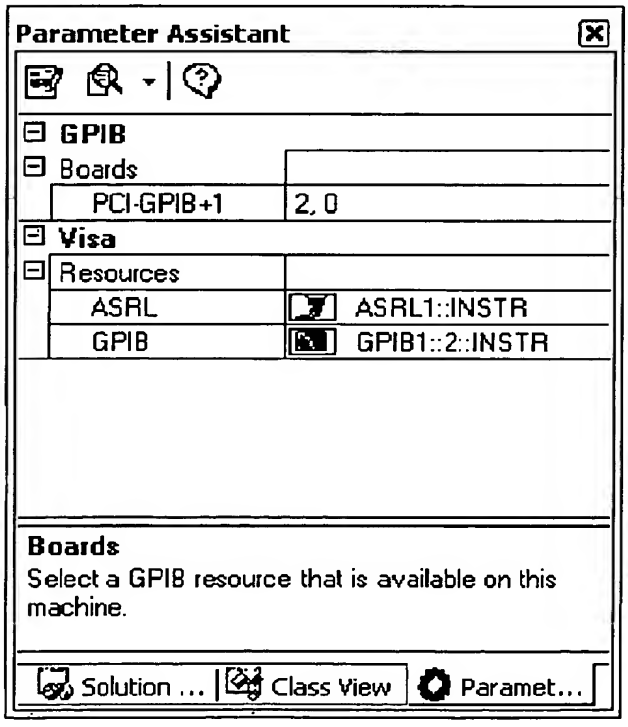
Parameter Assistant
GPIB
Boards
PCI-GPIB+1
2, 0
Visa
Resources
ASRL
ASRL1::INSTR
GPIB
GPIB1::2::INSTR
Boards
Select a GPIB resource that is available on this machine.
Solution ...
Class View
Paramet...

FIG. 12

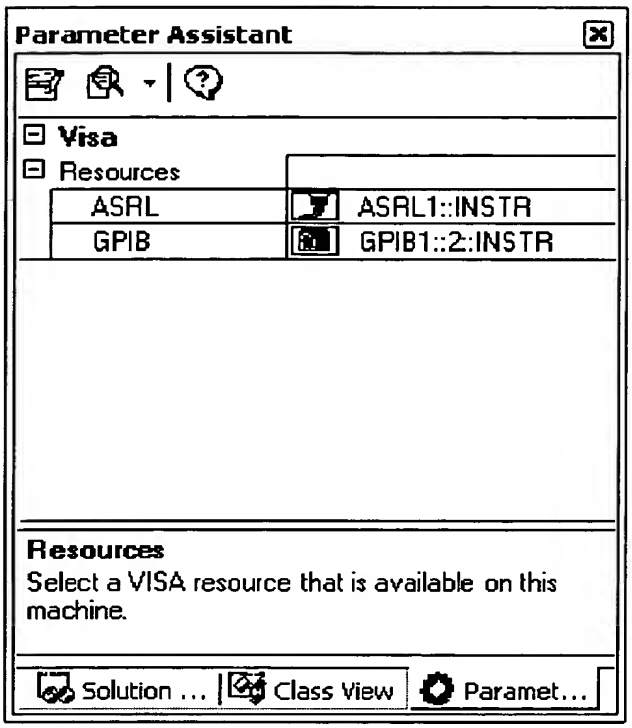
Parameter Assistant
Visa
Resources
ASRL
GPIB
ASRL1::INSTR
GPIB1::2:INSTR
Resources
Select a VISA resource that is available on this machine.
Solution ...
Class View
Paramet...

FIG. 13

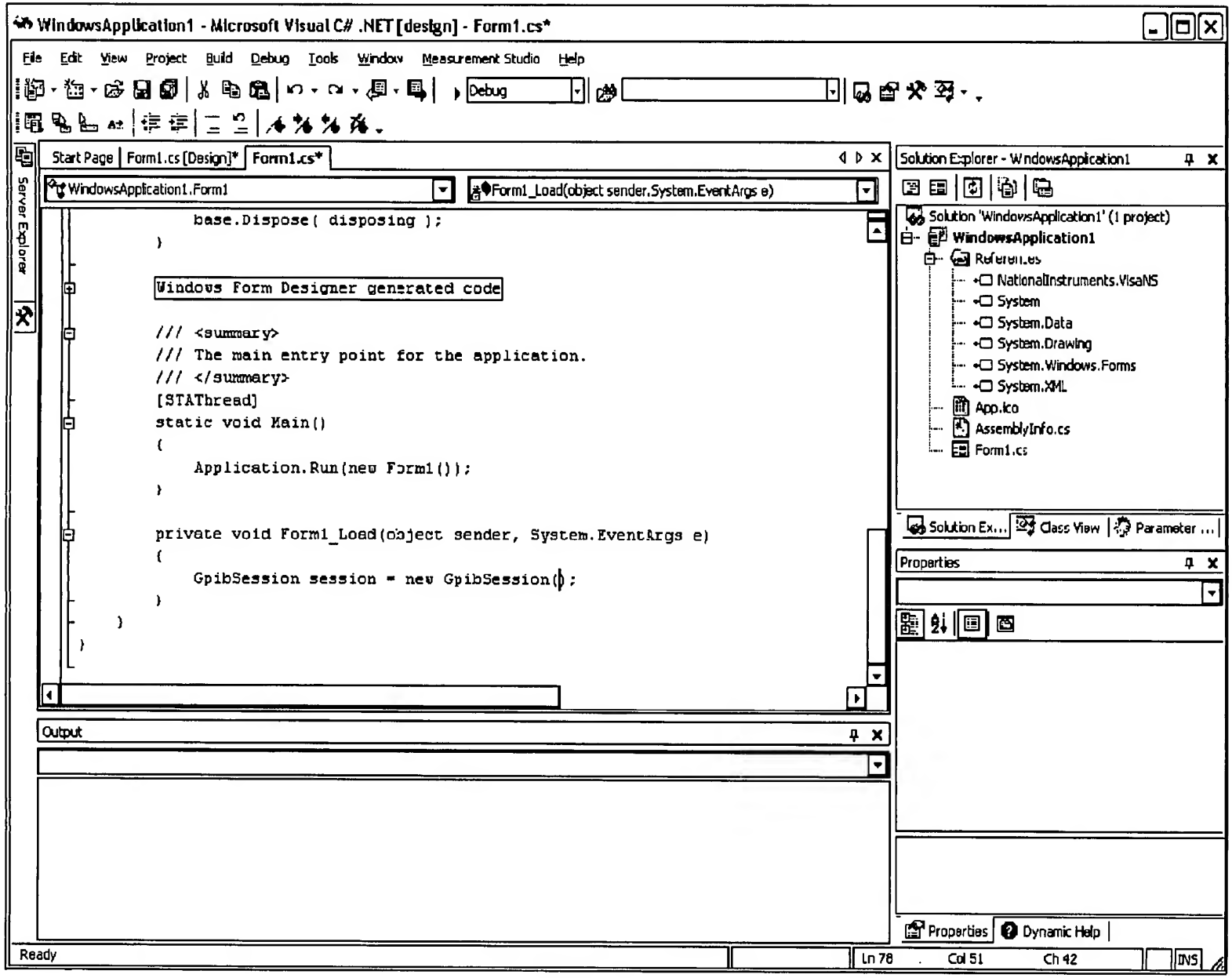
WindowsApplication1 - Microsoft Visual C# .NET [design] - Form1.cs*
File Edit View Project Build Debug Tools Window Measurement Studio Help
Debug
Start Page | Form1.cs [Design]* | Form1.cs*
WindowsApplication1.Form1
Form1_Load(object sender,System.EventArgs e)
base.Dispose( disposing );
Windows Form Designer generated code
/// <summary>
/// The main entry point for the application.
/// </summary>
[STAThread]
static void Main()
{
Application.Run(new Form1());
}
private void Form1_Load(object sender, System.EventArgs e)
{
GpibSession session = new GpibSession();
}
}
}
Solution Explorer - WindowsApplication1
Solution 'WindowsApplication1' (1 project)
WindowsApplication1
References
NationalInstruments.VisaNS
System
System.Data
System.Drawing
System.Windows.Forms
System.XML
App.ico
AssemblyInfo.cs
Form1.cs
Solution Ex...
Class View
Parameter ...
Properties
Output
Properties
Dynamic Help
Ready
Ln 78
Col 51
Ch 42
INS

FIG. 14

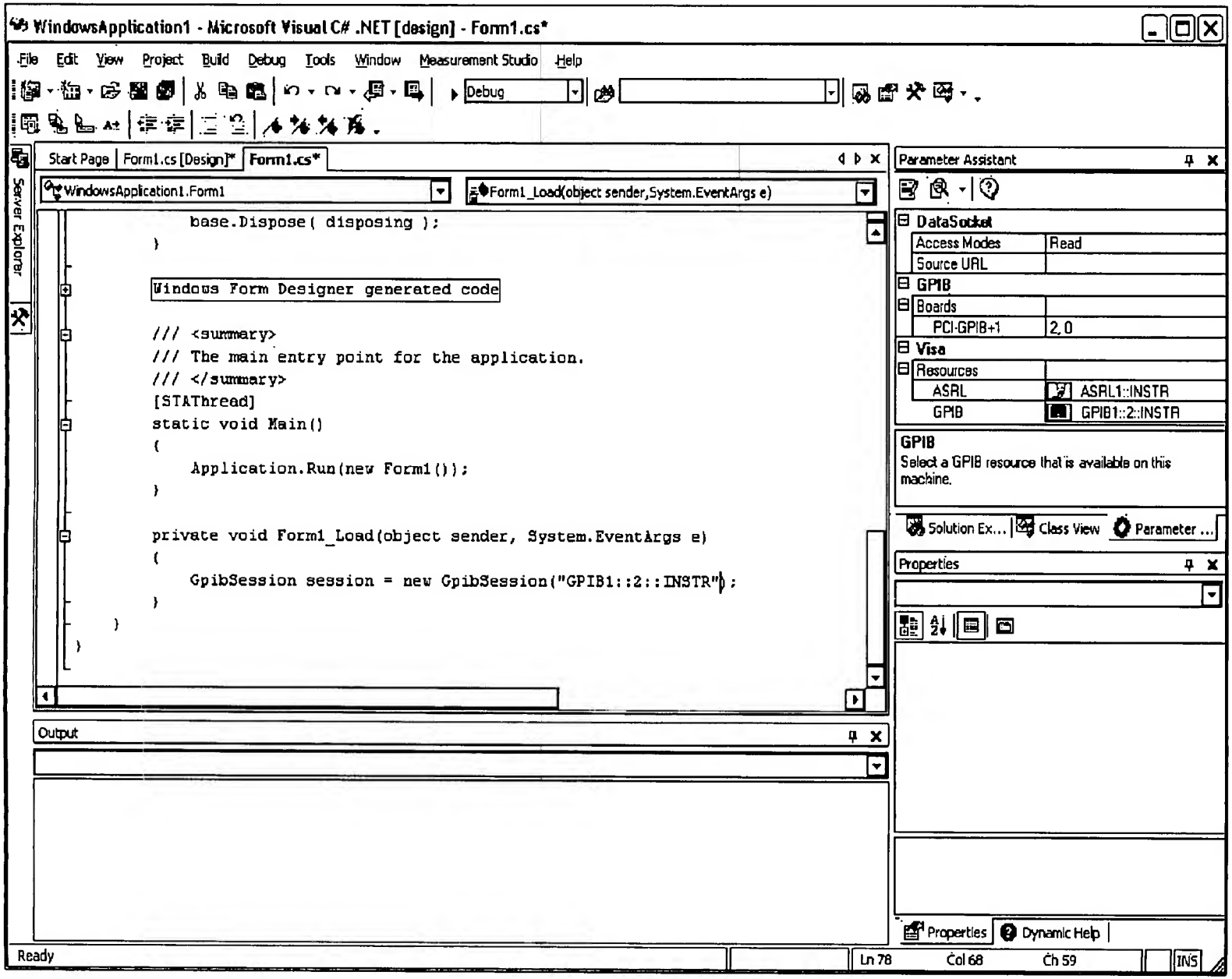
WindowsApplication1 - Microsoft Visual C# .NET [design] - Form1.cs*
File Edit View Project Build Debug Tools Window Measurement Studio Help
Debug
Start Page Form1.cs [Design]* Form1.cs*
WindowsApplication1.Form1
Form1_Load(object sender,System.EventArgs e)
base.Dispose( disposing );
}
Windows Form Designer generated code
/// <summary>
/// The main entry point for the application.
/// </summary>
[STAThread]
static void Main()
{
Application.Run(new Form1());
}
private void Form1_Load(object sender, System.EventArgs e)
{
GpibSession session = new GpibSession("GPIB1::2::INSTR");
}
}
}
Output
Parameter Assistant
DataSocket
Access Modes Read
Source URL
GPIB
Boards
PCI-GPIB+1 2.0
Visa
Resources
ASRL ASRL1::INSTR
GPIB GPIB1::2::INSTR
GPIB
Select a GPIB resource that is available on this machine.
Solution Ex... Class View Parameter ...
Properties
Properties Dynamic Help
Ready
Ln 78 Col 68 Ch 59 INS

FIG. 15